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AUTHOR Street, Richard L., Jr.
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ABSTRACT

Sacks's description-by-categorization theory was tested in a study to determine how contextual information influences the interpretation of verbal messages. The technique of enjambed conversation (a transcription of a conversation void of punctuation and speaker designation) was used to produce two verbal messages, one "more related" the other "less related" to a particular subject. The messages were then tape recorded so that the context surrounding them could be manipulated. The two recorded conversations differed in the length of speaker turn and the number of speakers. Two experiments were then conducted involving 60 college students. The first consisted of two cells, each with 15 subjects. Each cell heard a different version of the recording and then the subjects in both cells disenjambed the "more related" conversation. The second experiment followed the same procedure, disenjambing the "less related" conversation. The results supported the proposition that an element of context more relatable to the understanding of a verbal message will have more influence on how that message is interpreted than a less relatable element. The study indicated that elements of context influence how people make sense from verbal messages through the employment of economy and consistency rules. (FL)

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THE OPERATION OF CATEGORIZATION AND CONSISTENCY RULES IN MESSAGE INTERPRETATION

By Richard L. Street, Jr.*

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*Mr. Street is a doctoral student in speech communication at The University of Texas at Austin. He would like to thank Robert Hopper and John A. Daly for their helpful comments on earlier drafts of this paper.

Mailing Address:

Richard L. Street, Jr.
Department of Speech Communication
The University of Texas at Austin
Austin, Texas 78712

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THE OPERATION OF CATEGORIZATION AND CONSISTENCY RULES IN MESSAGE INTERPRETATION

In asserting the indexicality of all language, i.e., its meaning is situationally determined, Mehan and Wood (1975) argue "within a reality, it is necessary to assume. . . . universality in order to interact. But when more than one reality is taken into account. . . . then the universal indexicality of all symbols becomes apparent" (p. 95). Given the notion of the indexicality of language (see also Mahanty, 1964; Chomsky, 1968; Percy, 1972; Bates, 1976; Bar-Hillel, 1954; and Litton-Hawes, 1977), how one "makes sense" out of verbal messages warrants attention as a research question. The very nature of indexical expressions implies that they are context-sensitive. Yet, as Cicourel (1973) points out, the "context" that makes language meaningful may be immediate surroundings, recalled from past experience, or invented. The research reported here focuses on immediate and past experience context with the specific purpose of examining from an application of Sacks' (1966) notion of "description by categorization" how the manipulation of context

through recorded conversations can affect the way people interpret unstructured verbal messages as evidenced by the way they disenjamb enjambed conversations.

BACKGROUND

According to Sacks (1966), people apply to discourse "membership categorization devices," collections of categories which can be applied to a population to categorize that population. The following example (cited from Mehan & Wood, 1975, p. 120) is offered for support:

the baby cried the mommy picked it up

When asked to make sense out of this series of words, people generally punctuated it so:

The baby cried. The mommy picked it up.

People believe the "baby" to be the child of the "mommy." Two rules which govern the application of a category device explain the results. The first is the economy rule: "If a category from a device can be used to categorize another in a referentially adequate way, then the device may be applied to the population being described" (Mehan and Wood, 1975, p. 121). The second is the consistency rule: "If a category from a device is used to categorize a member, then that category or other

categories from the same device may be used to categorize other members of that population" (Mehan and Wood, 1975, p. 121). The population to be described is the series of words, "the baby cried the mommy picked it up." The first member in the population to be classified is "baby." Employing the economy rule, one finds devices which could include "baby." At least two devices would be "family" (baby, father, mother) and "stage of life" (baby, child, teenager, adult). Next, a person utilizes the consistency rule to find other members of the population which could be classified in one of these devices. "Mommy" does not fit in the "stage of life" device, but it does in the "family" device. As a result, the words are interpreted as "The baby cried. The mommy picked it up," and "mommy" is considered to be the mother of "baby."

Cicourel (1973) posits that categorization devices demonstrate how people recognize and formulate indexical expressions. He states that "a particular category serves as an index of unstated devices (p. 70)" and "the speaker uses interpretive procedures and their reflexive features to generate appropriate categories and assign them situational relevance (p. 70)." As such, Sacks' theory perhaps

offers an explanation of how people use contextual information to understand indexical expressions. Following Sacks' analysis, the interpretation of language is dependent upon how categories observed are linked to particular devices through the economy and consistency rules. As demonstrated in the example, "the baby cried the mommy picked it up," the language itself stimulates the application of various categories. However, the context surrounding the language may also produce collections of categories which conceivably will influence the way the language is to be interpreted (Mehan and Wood, 1975). For example, consider "break a leg." Depending on the circumstances surrounding it, this phrase could have various meanings. In applying the economy rule, one would try to find certain devices which could include such a remark, e.g. throwing curses at someone, wishing a performer good luck, screaming at an opposing player in a football game, questioning for details of an accident, etc. The consistency rule would allow one to seek data, including contextual information, in order to determine what is meant or would be consistent with the message. If the statement was made by a director or an actor, the consistency rule would be applied to categorize the event

in the "wishing a performer good luck" device, thus providing meaning for a receiver of the message. In this respect, economy and consistency rules operate much like the et cetera principle in that contextual information is sought to "fill in" the ambiguity of indexical expressions (Mehan and Wood, 1975). The point is that certain messages could be interpreted in a variety of ways depending on the context in which they appear. This "variety of ways" can be characterized according to device possibilities (economy rule) which could contain the statement. Supplied with contextual information, the receiver predicts how the message is to be interpreted by placing it in a presumably appropriate device (consistency rule).

The impact contextual cues will have on meaning assigned to language depends on what categories applicable to message and to context are likely to be linked together or, according to Sacks, contained in the same device. Obviously, some elements of context will be more relatable than others to the understanding of a message. For instance, suppose I leave a conversation about ping-pong for a few minutes. Upon returning, I hear the same participants talking about services and paddles. Most likely, I would understand they were still discussing ping-pong since I can easily relate the message, references

about services and paddles, to contextual information, previous conversation about ping-pong. So doing, I have placed message and context into the same device, say "talk about ping-pong." However, consider that upon returning I hear the same participants referring to pencils and cups. I may not understand this message because I cannot find contextual cues to assist in the formulation of meaning. One element of context, the earlier conversation about ping-pong, is of little help because it is not plausibly relatable to references about pencils and cups. In other words, I am not able to find a device that contains talk about ping-pong and talk about pencils and cups.

Inferring from Sacks' theory and the notion that some contextual information is more utile than other for understanding indexical expressions, it seems reasonable to think that, given the task of punctuating an enjambed conversation (a transcription of a conversation void of social markings such as speaker designation and punctuation) as it actually occurred, people would search for immediate, recalled, or invented contextual cues to complete the assignment. One possibility might be to refer to a previous conversation to see if a link can be drawn to the enjambed conversation. If people perceive

the earlier and the enjambed conversations to be from the same communication event, features of the previous one, such as number of speakers and turn length, should be reflected in the interpretation of the enjambed conversation. Using Jennings and Mehan's (1969) technique of enjambed conversations to provide a verbal message and using an audio-recorded conversation to manipulate the context surrounding that message, the following proposition is examined: "An element of context more relatable to the understanding of a verbal message will have more influence on how that message is interpreted than a less relatable element of context." Two hypotheses are investigated.

Hypothesis 1. "Significantly more subjects will respond that the 'more related-punishment' enjambed conversation was part of an earlier conversation about rape than the 'less related-rally' enjambed conversation."

Hypothesis 2. "Of the subjects who disenjambed 'more related-punishment,' those who heard an audio-recorded conversation with two speakers and long turns will designate significantly fewer speakers with longer turns than the subjects who listened to an audio-recorded conversation with four speakers and short turns."

Regarding the subjects who disenjambed "less related-rally," no theoretical explanation exists for the prediction of significant differences in number of speakers and turn length between those hearing the recording of two speakers with long turns and those hearing four speakers with short turns unless, of course, most people believed that "less relatable-rally" was a part of the recorded conversation. In this case, the second hypothesis applies. However, if there are no significant differences and if most believed the two conversations not to be from the same interaction, one possible explanation is that the subjects were not influenced by the recorded talk and thus had to resort to their individual frames of references to complete the task.

METHODOLOGY

Subjects

The subject sample consisted of 60 male and female undergraduates enrolled in basic speech communication courses at a large Southern university.

Independent Measures

Since this study examines how "context" affects the manner in which people interpret information, ways were sought to manipulate context. Two audio-recorded conversations were produced which differed in two respects, number of speakers and speaker turn length. A speaker turn is defined as the time when one speaker begins talking until another speaker talks. A speaker turn is measured in words per turn. One conversation, hereafter called "4 speakers, short turn," consisted of four females discussing a mutual friend who recently had been raped. The mean turn length was 4.76 words with a standard deviation of 3.03. The other conversation, hereafter referred to as "2 speakers, long turn," involved two females discussing the same subject. Average turn length was 19.23 words with a standard deviation of 7.39. The wording in the conversations was approximately the same. All terminology deviations were the result of adapting the conversations to be suitable for two or four speakers. In addition, the lengths of the recordings were almost equal, 40 seconds for "4 speakers, short turn" and 45 seconds for "2 speakers, long turn."

The conversations were composed by the experimenter. Four females role-played and rehearsed the two conversations with two of the women participating in both. Once the conversations sounded natural, they were tape recorded.

Dependent Measures

The "information" to be processed was in the form of an "enjambed conversation." Jennings and Mehan (1969) developed this instrument which is a transcript of talk stripped of all social markings such as speaker designation, turns, punctuation, and setting. Here is an example:

hi how are you doing fine hey theres bill

Jennings and Mehan's procedure (as described by Mehan and Wood, 1975) for disenjambing conversations involved several steps. First, a selected conversation is enjamed. Second, persons unaware of the actual conversation were given the enjambed version and instruction to designate and assign turns to speakers and punctuate the conversation. In the third step, each individual answered a series of questions about the conversation, e.g. age, sex number, relationship of people involved; location; and subject matter. Also, justification for these answers was required.

Successive layers of information about the conversation was periodically provided, and following each layer, the subjects were asked to respond to the same questions. Ultimately, the respondents witnessed a video-tape of the conversation. This procedure demonstrates how subsequent additions of contextual information will influence and even change the meaning one assigns to a particular event.

This study uses an adaptation of Jennings and Mehan's method. The researcher developed two enjambed conversations. One, hereafter referred to as "more related-punishment," focused on punishments for criminals and contained references to castration making it more plausibly related to rape:

> they ought to be put in jail for 20 years really yeah i think that if they put them away for a long time well you then perhaps they can be rehabilitated you know though rehabilitation is not very effective right but what other alternatives are there we can kill them we can castrate them we can ship them away to a deserted island make them pay their debts to society people are cruel well i must admit that i prefer stricter penalties you of course but i really cant be sure just how the more i see and hear the more pissed off you get well if i knew the answers so you think they should kill them they should shoot his ass lets not give him a trial just kill him i mean he took advantage of other people an eye for an eye and a tooth for a tooth right

The other enjambed conversation, hereafter called "less related-rally," concerned a rally of an unspecified nature. It seems possible, but considerably less plausible to relate this passage to the topic of rape:

> hey by the way we are going to the rally sunday night yeah seems to me that this will be a wild one think therell be a large turnout right perhaps we can get some involvement in this thing get some people interested in doing something about it really create some excitement you know people are so apathetic this could affect us all no one is concerned until after it happens right well this meeting should make an impression on everybody theyve got some really good speakers they are going to talk about some important aspects of the problem they can really stir up a listeners emotions it has been advertised all week after its over were going to avis walshs theres a discussion on the subject over there she is a brilliant panelist cant wait to hear her really it should help our publicity immensely maybe now people will be concerned

In order to test the proposition and hypotheses by making the "more related-punishment" conversation more closely related to a discussion about rape than "less related-rally," fifteen undergraduates (not subjects in the experiment) were given copies of both enjambed conversations and asked to select the one most closely related to rape. All 15 checked "more related-punishment."

Procedure

Two separate experiments were conducted. Experiment 1 consisted of two cells with 15 subjects each. One cell heard the "4 speakers, short turn" recording while the other listened to "2 speakers, long turn." Subjects in both cells disenjambed "more related-punishment" after hearing their respective tapes.

Experiment 2 was designed in the same manner. However, the subjects disenjambed "less related-rally."

Subjects were told they were participating in a study which examines how people get meaning from hearing a conversation as opposed to reading a written representation of a conversation. They were informed that they were involved in the written portion of this study and would disenjamb a conversation. The following example was provided:

> hey how are you today fine hey theres bill whats happening

Some of the ways to interpret the talk through disenjambing were described to the subjects:

#1 (Speaker)	#2
Hey, how are you today? What's happening?	Fine, hey there's Bill!

#1	#2	#1
Hey, how are you today?	Fine.	Hey, there's Bill.

#3
What's happening?

#1 #2 #1 #3
Hey! How are you today? Fine. Hey, there's

#4
Bill! What's happening?

After confirming that the subjects understood how to disenjamb an enjambed conversation, the alleged purpose of the study, perception differences between conversations heard and conversations read, was reiterated. The students were told that they were to think of the enjambed talk in terms of how they think it might sound orally. An example (one of the audio-recorded conversations) of a conversation was played to facilitate thinking along these lines. After hearing the conversation, the subjects were given the enjambed conversation and instructed to disenjamb it. At no time did the experimenter indicate that there was a connection between the talk heard on the tape and the enjambed conversation. The data collected from each disenjambed conversation were the number of speakers designated, the average turn length (in words per turn), and the answers to the question, "Do you think this enjambed conversation was part of the audio-recorded conversation you heard earlier?"

Data Analysis

The first step of the data analysis process was to test Hypothesis 1. The three possible answers to the question, "Do you think this enjambed conversation was part of the audio-recorded conversation you heard earlier?," were "yes," "maybe," and "no." A chi-square test was employed to determine if there was a significant difference ($p<.05$) between responses in Experiment 1 ("more related-punishment" and Experiment 2 ("less related-rally").

The second step involved testing Hypothesis 2. After determining the number of speakers and the mean turn length in each disenjambed conversation in Experiment 1, t-tests were used to establish degree of significance between cells.

The third step consisted of determining the number of speakers and the mean turn length of each disenjambed conversation in Experiment 2. Again, t-tests were applied to discover whether the difference between cells was significant.

RESULTS

Table 1 contains the responses to the question, "Do you think this conversation is part of the audio-

recorded conversation you heard earlier?"

Insert Table 1 About Here

Hypothesis 1, "Significantly more subjects will respond that the 'more related-punishment' enjambed conversation was part of an earlier conversation about rape than the 'less related-rally' enjambed conversation," was partially supported since the difference was in the predicted direction but was not significant ($\chi^2 = 3.29(2)$, N.S.). The reason the difference was small seems to be because two-thirds of the subjects believed "less related-rally" was or could be part of the tape-recorded conversation on rape. Apparently, though less likely than talk about punishment for criminals, it is plausible to consider the topic of a rally as part of a discussion about rape.

Experiment 1

Speaker number and turn length data are presented in Table 2.

Insert Table 2 About Here

Hypothesis 2, "Of the subjects who disenjambed 'more related-punishment,' those who heard an audio-recorded conversation with two speakers and long turns will designate significantly fewer speakers with longer turns than the subjects who listened to an audio-recorded conversation with four speakers and short turns," was supported. Subjects in the "4 speakers, short turn" cell designated significantly more speakers ($p<.001$) and shorter turns ($p<.05$) than subjects in the "2 speakers, long turn" cell. Oddly enough, although the "4 speakers, short turn" cell heard four speakers in the recorded conversation, only two subjects interpreted the enjambed passage as having four speakers whereas most believed it to have three. No verifiable reason is available to explain this discrepancy, but perhaps most of the subjects in this cell either thought the recorded conversation had only three speakers (several made this comment) or intuitively felt that there were three speakers in the enjambed conversation speakers. Or, perhaps, the subjects were merely making a distinction between two and more than two speakers.

Experiment 2

Table 3 represents the number of speakers and turn length data in the second experiment.

Insert Table 3 About Here

Though, the two cells differed in the direction of the recorded conversations, the difference was not significant. No subject believed the enjambed passage contained four speakers and only three subjects designated three speakers while the others depicted two. Due to the consensus on number of speakers, it seems possible that the structure of the enjambed text implied two speakers.

As mentioned earlier, the absence of significance might be expected since fewer people linked the tape-recorded and enjambed conversation and thus would not be influenced in their interpretation of the latter by the former. Yet, two explanations are possible regarding why the difference between cells was in the direction of features of the rape conversation. First, though the subjects may not have connected the two conversations topically, perhaps the audio-recorded discussion influenced their perspectives on how a conversation should occur.

In other words, the earlier conversation had an impact on how many speakers should be in a conversation and how long they should speak. In this case, Sacks' description by categorization theory would indicate that subjects categorized the two conversations into the same device procedurally as opposed to topically. Second, since many subjects in this experiment believed that the two conversations were or could be part of one, the difference between cells reflects the influence of the audio-recorded conversations and thereby support Hypothesis 2.

DISCUSSION

This study aimed to examine how the manipulation of context through an audio-recorded conversation about rape would affect the way people interpreted a verbal message, i.e., an enjambed conversation. "More related-punishment" was established as more closely related to a conversation about rape than "less related-rally." Thus, according to the proposition, "an element of context more relatable to the understanding of a verbal message will have more influence on how that message is interpreted than a less relatable element of context," subjects in Experiment 1 would be more affected by the recorded conversation than

subjects in Experiment 2. The results support the proposition in two respects. More subjects who disenjambed "more related-punishment," (Experiment 1) felt that the enjambed passage was a part of the recorded conversation than did subjects who disenjambed "less related-rally" (Experiment 2). Applying Sacks' analysis, the results indicate that "rape" and "criminal penalties" are more commonly found in the same device than "rape" and "rally." Nevertheless, both experiments demonstrate the psychological reality of Sacks' "description by categorization" process since subjects in both experiments found ways to link the two conversations. Of the 60 subjects, 29 (48%) believed the enjambed discourse and the recorded talk to be of the same communication event while 16 (28%) acknowledged that possibility, though no explicit connection between the two conversations was made.

Second, speaker number and turn length designations warrant acceptance of the proposition. When a person applies the economy and consistency rules and decides that a current message is part of a previous one, the characteristics of the earlier message should be reflected in the interpretation of the present message. Apparently, this occurred in Experiment 1. A significant difference

was observed between cells regarding speaker number and turn length. Subjects in the "4 speakers, short turn" cell distinguished significantly more speakers ($p<.001$) with shorter turn lengths ($p<.05$) than did subjects in the "2 speakers, long turn" cell. The speaker number and turn length differences ($p<.3$ and $p<.1$ respectively) were less distinct in Experiment 2 where subjects disenjambed a conversation that was less relatable to rape. Applying "description by categorization" theory, the differences in degree of significance between experiments are due to the fact that more subjects in Experiment 1 connected the two conversations than did subjects in Experiment 2. If this analysis is accurate, then subjects in Experiment 2 who did link the two conversations (7 in "4 speakers, short turn" and 4 in "2 speakers, long turn") would show differences in their interpretations of the enjambed conversations in the direction of their respective recorded conversations. Regarding the turn length depiction of these subjects, this was the case as those in the "4 speakers, short turn" cell were significantly shorter than those in the "2 speakers, long turn" cell ($t(9)=3.24$, $p<.02$). However, the difference between speaker number was less obvious ($t(9)=1.51$, $p<.2$). As

mentioned earlier, perhaps "less relatable rally" implicitly indicates that only two people are talking.

Three observations are made from the results of this study. First, evidence is provided for the existence of certain rules, specifically the economy and consistency rules, which people employ in making language meaningful. Second, people use contextual information in their efforts to understand messages. Third, the more a message is related to the context surrounding it, the more likely contextual information will influence the meaning given to the message.

Table 1

Subjects Responses to the Question,
"Do you think this enjambed conversation was part of
the audio-recorded conversation you heard earlier?

	(enjambed-punishment) Experiment 1*			(enjambed-rally) Experiment 2*		
Response	"4...turn"	"2...turn"	Total	"4...turn"	"2...turn"	Total
yes	8	10	18	7	4	11
maybe	4	2	6	4	5	9
no	3	3	6	4	6	10

$\chi^2 = 3.29(2)$, N.S.

Table 2

Speaker Number and Turn Length
Data in Experiment 1

	"4 speakers, short turn"		"2 speakers, long turn"	
	$\bar{X}$	sd	$\bar{X}$	sd
Speaker number	2.87*	.52	2.20*	.41
Turn length	10.63**	3.07	13.51**	3.37

*$t(28)=3.94$, $p<.001$

**$t(28)=2.44$, $p<.05$

Table 3

Speaker Number and Turn Length Data
in Experiment 2

	"4 speakers, short turn"		"2 speakers, long turn"	
	$\bar{X}$	sd	$\bar{X}$	sd
Speaker number	2.20*	.41	2.07*	.26
Turn length	12.75**	3.71	15.87**	7.63

*$t(28)=1.04$, $p<.3$

**$t(28)=1.97$, $p<.10$

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